

212/262

valve or sphincter controls flow of fluid through a vessel of the body and is supported by tissue of the vessel near the valve, said device comprising:

- a catheter body having a distal end and a proximal end, said distal end being adapted for insertion into the body;

- a first balloon located at the distal end of the catheter, said first balloon being inflatable to a diameter greater than the catheter body distal end, and a first inflation lumen communicating from the proximal end of the catheter body to the distal end of the catheter body;

- a heating element mounted on the distal end of the catheter, proximal to the first balloon;

- a suction lumen communicating from the proximal end of the catheter body to the distal end of the catheter body, and a suction port located on the distal end of the catheter communicating from suction lumen to the exterior of the catheter body, said suction port being located proximal the heating element; whereby suction applied to the vessel through the suction port will draw the tissue of the vessel near the valve toward the heating element; and

- a vacuum source operably connected to the suction lumen.

9. (amended) A device for treating an incompetent anatomical valve or sphincter within the body of a patient, wherein said valve or sphincter controls flow of fluid through a vessel of the body and is supported by tissue of the vessel near the valve, said device comprising:

- a catheter body having a distal end and a proximal end, said distal end being adapted for insertion into the body;

212/262

- a first balloon located at the distal end of the catheter, said first balloon being inflatable to a diameter greater than the catheter body distal end, and a first inflation lumen communicating from the proximal end of the catheter body to the distal end of the catheter body, wherein the first inflation lumen is in fluid communication with the first balloon;
- a first heating element mounted on the distal end of the catheter, proximal to the first balloon;
- a second balloon located at the distal end of the catheter, said second balloon being inflatable to a diameter greater than the catheter body distal end, said second balloon proximal to the first balloon and proximal to the first heating element, and a second inflation lumen communicating from the proximal end of the catheter body to the distal end of the catheter body, wherein the second inflation lumen is in fluid communication with the second balloon;
- a second heating element mounted on the distal end of the catheter, distal to the second balloon and proximal to the first heating element;
- a suction lumen communicating from the proximal end of the catheter body to the distal end of the catheter body, and at least one suction port located on the distal end of the catheter communicating from the suction lumen to the exterior of the catheter body, said at least one suction port being located proximal to the first heating element and distal to the second heating element; whereby suction applied to the vessel through the at least one suction port will draw the tissue of the vessel near the valve toward the first and second heating elements; and
- a vacuum source operably connected to the suction lumen.

212/262

10. (amended) A device for treating a plurality of incompetent anatomical valves or sphincters within the body of a patient, wherein said plurality of valves or sphincters control flow of fluid through a vessel of the body and are supported by tissue of the vessel near the plurality of valves, said device comprising:

- a catheter body having a distal end and a proximal end, said distal end being adapted for insertion into the body;
- a first balloon located at the distal end of the catheter, said first balloon being inflatable to a diameter greater than the catheter body distal end, and a first inflation lumen communicating from the proximal end of the catheter body to the distal end of the catheter body, wherein the first inflation lumen is in fluid communication with the first balloon;
- a second balloon located at the distal end of the catheter, said second balloon being inflatable to a diameter greater than the catheter body distal end, said second balloon proximal to the first balloon, and a second inflation lumen communicating from the proximal end of the catheter body to the distal end of the catheter body, wherein the second inflation lumen is in fluid communication with the second balloon;
- a plurality of heating elements mounted on the distal end of the catheter body, wherein each of the plurality of heating elements are disposed in series along the length of the catheter body, wherein two succeeding heating elements comprise a pair of heating elements, and wherein the pair of heating elements are further disposed on the catheter body such that a section of catheter body separates each pair of heating elements; and